

Listing of Claims:

Claim 1 (Currently amended): A method of identifying the location of premalignant or malignant breast cancer cells within a breast duct or breast ductal network, said method comprising:

providing a compound comprising a targeting molecule coupled to an identifying agent;

delivering the compound through at least one breast duct;

allowing the delivered compound to bind to premalignant or malignant cells within said at least one duct or ductal network and unbound portions of the delivered compound to be eliminated from said at least one duct; and

detecting the presence of the compound bound to premalignant or malignant cells within said at least one duct or ductal network after said unbound portions of the delivered compound are no longer present within said at least one breast duct; and

identifying the location of the premalignant or malignant cells bound to said compound within the at least one breast duct or ductal network.

Claim 2. (Original) A method as in claim 1, wherein delivering comprises cannulation or catheterization of the breast duct.

Claim 3. (Original) A method as in claim 1, wherein the coupled compound is delivered to more than one duct on a breast.

Claim 4. (Original) A method as in claim 1, wherein the cells are identified for the purpose of excising tissue surrounding and including the cells.

Claim 5. (Currently amended) 5. A method of identifying the location of premalignant or malignant breast cancer cells within a breast duct or breast ductal network, said method comprising:

providing a premalignant or malignant cancer cell specific identifying agent that is cancer cell specific within the breast duct or breast ductal network;

delivering the identifying agent through at least one breast duct;

allowing the delivered identifying agent to bind to premalignant or malignant cells within said at least one duct or ductal network and unbound portions of the delivered identifying agent to be eliminated from said at least one duct; ~~and~~

detecting the presence of the identifying agent bound to premalignant or malignant cells within said at least one duct or ductal network after said unbound portions of the delivered identifying agent are no longer present within said at least one breast duct; and

identifying the location of the premalignant or malignant cells bound to said identifying agent within the at least one breast duct or ductal network.

Claim 6. (Original) A method as in claim 5, wherein delivering comprises cannulation or catheterization of the breast duct.

Claim 7. (Original) A method as in claim 5, wherein the identifying agent is delivered to more than one duct on a breast.

Claim 8. (Original) A method as in claim 5, wherein the cells are identified for the purpose of excising tissue surrounding and including the cells.

Claim 9. (Currently Amended) A method of determining the lymph node involvement in patients diagnosed with premalignant or malignant breast cancer growths, said method comprising:

- providing a compound comprising an identifying agent coupled to a targeting agent;
- delivering the compound through at least one breast duct;
- allowing the delivered compound to bind to premalignant or malignant cells within said lymph nodes and unbound portions of the delivered compound to be eliminated from said at least one duct;
- determining the lymph node involvement after said unbound portions of the delivered compound ~~have exited~~ are no longer present within said at least one breast duct; and
- identifying the location of said lymph node involvement.

Claim. 10. (Currently Amended) A method as in claim 9, wherein ~~detecting~~ determining lymph node involvement comprises detecting the identifying agent coupled to a targeting agent in a sentinel lymph node.

Claim 11. (Original) A method as in claim 9, wherein delivering comprises cannulation or catheterization of the breast duct.

Claim 12. (Original) A method as in claim 9, wherein the identifying agent coupled to a targeting agent is delivered to more than one duct on a breast.

Claim 13. (Currently Amended) A method of determining the lymph node involvement in patients diagnosed with premalignant or malignant breast cancer growths, said method comprising:

providing ~~an~~ a premalignant or malignant cancer cell specific identifying agent that is cancer cell specific within the breast duct or breast ductal network;

delivering the identifying agent through at least one breast duct;

allowing the delivered identifying agent to bind to premalignant or malignant cells within said lymph nodes and unbound portions of the delivered identifying agent to be eliminated from said at least one duct;

determining the lymph node involvement after said unbound portions of said delivered identifying agent ~~have exited~~ are no longer present within said at least one breast duct; and

identifying the location of said lymph node involvement.

Claim 14. (Currently Amended) A method as in claim 13, wherein ~~detecting~~ determining lymph node involvement comprises detecting the identifying agent in a sentinel lymph node.

Claim 15. (Original) A method as in claim 13, wherein delivering comprises cannulation or catheterization of the breast duct.

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Claim 16. (Original) A method as in claim 13, wherein the identifying agent is delivered to more than one duct on a breast.

Claims 17-32. (Cancelled)

